

ATG GCT CCC CTA CAG ACT GCA CTC CTG GTT GTC CTC GTC CTC CTT GCT GTG GCG CTT CAA  
 GCA ACT GAG GCA GGC CCC TAC GTC GGC AAC ATG GAA GAC AGC GTC TGC TGC CGT GAT TAC  
 GTC CGT TAC CGT CTG CCC CTC CGC GTG GTG AAA CAC TTC TAC TGG ACC TCA GAC TGC TGC  
 CGG AGG CGT GGC GTC GTG TTG CTC ACC TTC AGG GAT AAG GAG ATC TGT GCC GAT CCC AGA  
 GTG CCC TGG GTG AAG ATG ATT CTC AAT AAG CTC AGC CAA TGA  
 AGAGCCCTACTCTGATGACCGTGGCCTTGGCTCTTCAGGAAGGCTCAGGAGCCCTACCTCCCTGCCATTATAGCTGCTC  
 CCCGCCAGAAGCCTGTGCCAACTCTCTGCAATCCCTGATCTCCATCCCTGTGGCTGTACCCCTTGGTCACCTCCGTGCT  
 GTCACTGCCATCTCCCCCTGACCCCTCTAAACCTCTCTCTCCCTCCCTCCCTGCAGTCAGAGGGTCTCTTTCCTCA  
 GCGATTCCTCTGCTTAAACCCCTTCCATGACTTCCACTGCCCTAAGCTCAGGTCACTCTCCCAAGCCTGCCATGTGGCC  
 CTCCTGATCTGGGTTCCTATTCTGTCTCCAGTCTGCCCACTTCCCTTCATGAATGTGGGTCTAGCTCCCTGTCTCTC  
 AAACCCATACTACACATCCCACTTCTGGGTCCTTCCCTGGGATGTTCTCTCACTCAGAAAGTCCCTCTGACGGCCGC

FIG. 1





I K V A K A E A A G H R D T L Y T M L I	387
ATA AAG GTG GCT AAA GCT GAG GCA GCG GGC CAC AGG GAC ACC TTG TAC ACG ATG CTG ATA	1288
K W V N K T G R D A S V H T L L D A L E	407
AAG TGG GTC AAC AAA ACC GGG CGA GAT GCC TCT GTC CAC ACC CTG CTG GAT GCC TTG GAG	1348
T L G E R L A K Q K I E D H L L S S G K	427
ACG CTG GGA GAG AGA CTT GCC AAG CAG AAG ATT GAG GAC CAC TTG TTG AGC TCT GGA AAG	1408
F M Y L E G N A D S A M S *	441
TTC ATG TAT CTA GAA GGT AAT GCA GAC TCT GCC ATG TCC TAA	1450
GTGTGATTCTCTTCAGGAAGTGAGACCTTCCTGGTMTACCTMTTTCCTGGAAAAAGCCCACTGGACTCCAGTCAGTA	1529
GGAAAGTGCCCAAAATGTGCATGACCGGTACTGGAAGAACTCTCCCATCCAACATCAGGATGGATGGAACATCCT	1608
GTAACCTTTTCACTGCACTTGGCATTATTTTTATAAGCTGAATGTGATAATAAGGACACTATGGAAATGTCTGGATCATT	1687
CCGTTTGTGGTACTTTGAGATTGGTMTGGGATGTCATTGTMTTTCACAGCACTMTTTCCTAATGTAAATGCTTTA	1766
TTTATTTATTGGGCTACATTGTGAAGATCCATCTACACAGTCGTGTGTCGACTTCACCTGATACTATATGATATGAACC	1845
TTTTTGGGTGGGGGGTGCNGGGCAATTCACCTCTGTCTCCAGGCTGGAGTGCAATGGTGCAATCTTGGCTCACTATA	1924
GGCTTCACCTCTGAGGCTCAAGCGATCTCTCACCTCAGCCATCCAAATAGCTGGGACCACAGGTGTGCACCACCACGC	2003
COGGCTAATTTTTTGTATTMTGTCTAAATATAAGGGCTCTCTATGTTGCTCAGGGTGGTCTCGAATTCCTGGACTCAAG	2082
CAGTCTGCCCACTCAGACTCCCAAAGCGGTGGAATTAGARGCGTGAGCCCCCATGCTTGGCCTTACCTTTCTACCTTTT	2161
TATAATTCTGTATGTTATTATTTTATGAACATGAAGAACTTTAGTAAATGTACTTGTMTTACATAGTTATGTGAATAGA	2240
TTAGATAAACATAAAAAGGAGGAGACATACAATGGGGGAAGAAGAAGAAGTCCCTGTAGAAGTTNACGNTCTGGTTTC	2319
CAGCCTTCCCTCAGATGTACTTGGCTTCAATGATTGGCAACTTCTACAGGGGCCAGTCTTTTGAAGTGGACAACCTTA	2398
CAAGTATATGAGTATTATTTATAGGTAGTTGTTACATATGAGTCGGGACCAAAGAGAACTGGATCCACGTGAAGTCCT	2477
GTGTGTGGCTGGTCCCTACCTGGGCAGTCTCATTTGCCACCCATAGCCCCCATCTATGGACAGGCTGGACAGAGGCAGA	2556
TGGGTAGATCACACATAACAAATAGGGTCTATGTATATCCCAAGTGAACCTTGAGCCCTGTTTGGGCTCAGGAGATAGA	2635
AGACAAAATCTGTCTCCCAAGTCTGCCATGGCATCAAGGGGAAGAGTAGATGGTGCTTGAGAAATGGTGTGAAATGGTT	2714
GCCATCTCAGGAGTAGATGGCCCGGCTCACTTCTGGTTATCTGTACCCCTGAGCCCATGAGCTGCCTTTTAGGGTACAG	2793
ATTGCCCTACTTGAGGAOCTTGGCCGCTCTGTAAAGCATCTGACTCATCTCAGAAATGTCAATTCTTAAACACTGTGGCAA	2872
CAGGACCTAGAATGGCTCAGGCATTAAAGGTTTTCTTCTGTGTCTCTGTTCTATTATGTTTTAAGACCTCAGTAACCAT	2951
TTCAGCCTCTTTCCAGCAAACCTTCTCCATAGTATTTTCAGTCAATGGAAGGATCATTTATGCAGGTAGTCATTCCAGGA	3030
GTTTTTGGTCTTTTCTGTCTCAAGGCATTGTGTGTTTTGTTCGGGACTGGTTTGGGTGGGACAAAGTTAGAATTGCCT	3109
GAAGATCACACATTCAGACTGTGTGTCTGTGGAGTTTATAGGAGTGGGGGTGACCTTTCTGGTCTTTGCACTTCCATC	3188
CTCTCCCACTTCCATCTGGCATCCCAAGGTTGTCCCTGCACCTTCTGGAAGGCACAGGGTGCTGCTGCCTCCTGGTCT	3267

FIG. 3 (2 of 3)

TTGCCTTTGCTGGGCTTCTGTGCAGGAACGCTCAGCCTCAGGGCTCAGAAGGTGCCAGTCCGGTCCCAGGTCCCTTGTG 3346  
 CCTTCCACAGAGGCCTTCCTAGAAGATGCATCTAGAGTGTGAGCCTTATCAGTGTMTAAGATTTTCTTTTATTTTAA 3425  
 TTTTTCGAGACAGAACTCTACTCTCTGCCCCAGGCTGGAGTGCACCGGTACGATCTTGGCTCAGTGCACCTCCGCT 3504  
 CCTGGGTCAAGCGATTCCTCGTGCCCTCAGCCTCCGGAGTAGCTGGGATTGCAGGCACCCGCCACCACGCTGGTTAATT 3583  
 TTTGTATTTTCTAGTAGAGACGGGGTTTCACCATGTTGGTCAGGCTGGTCTCGAACTCCTGACCTCAGGTGATCCACCTT 3662  
 GGCCTCCGAAAGTGTGGGATTACAGGCGTGAGCCACCAGCCAGGCCAAGCTATTCTTTTAAAGTAAGCTTCCTGACGA 3741  
 CATGAAATAATTGGGGTTTGTGTGTTAGTTACATTAAGGCTTGTCTATATCCCCAGGCCAAATAGCATGTGACACAGG 3820  
 ACAGCCATAGTATAGTGTGTCACCTCGTGGTTGGTGTCTTTCATGCTTCTGCCCCTGTCAAAGGTCCCTATTTGAAATGT 3899  
 GTTATAATACAAACAAGGAAGCACATTGTGTACAAAATACTTATGTATTTATGAAATCCATGACCAAATTAAATATGAAA 3978  
 CCTTATATAAGGSGGGGGGGCCCC 4051

4051  
 3978  
 3899  
 3820  
 3741  
 3662  
 3583  
 3504  
 3425  
 3346



A S V H T L L D A L E T L G E R L A K Q 387  
GCC TCT GTC CAC ACC CTG CTG GAT GCC TTG GAG ACG CTG GGA GAG AGA CTT GCC AAG CAG 1288  
  
K I E D H L L S S G K F M Y L E G N A D 407  
AAG ATT GAG GAC CAC TTG TTG AGC TCT GGA AAG TTC ATG TAT CTA GAA GGT AAT GCA GAC 1348  
  
S A M S \* 412  
TCT GCC ATG TCC TAA 1363  
  
GTGTGATTCCTTCAGGAAGTGAGACCTTCCCTGGTTTACCTTTTTCGTGAAAAAGCCCACTGGACTCCAGTCAGTA 1442  
GGAAAGTGCCACAATTGTTCACATGACCGGTACTGGAAGAACTCTCCCATCCAACATCACCAGTGGATGGAACATCCT 1521  
GTAACTTTTCACTGCACCTTGGCATTATTTTATAAGCTGAATGTGATAATAAGGACACTATGGAAATGTCTGGATCATT 1600  
CCGTTTGTGCGTACTTTTCAGATTGGTTTGGGATGTCTATGTTTCACAGCACTTTTATCTCTAATGTAAATGCTTTA 1679  
TTTATTTATTTGGGCTACATTGTGAAGATCCATCTACACAGTGTGTGTCGACTTCACTTGATCTATATGATATGAACC 1758  
TTTTTTGGGTGGGGGGTGCNNGGCAATTCACCTCTGTCTCCAGGCTGGAGTGCAATGGTGCAATCTTGGCTCACTATA 1837  
GCCTTGACCTCTGAGGCTCAAGCGATTCTCTCACCTCAGCCATCCAAATAGCTGGGACCACAGGTGTGCACCACCACCC 1916  
CCGGCTAAATTTTGTGTAATTTGTCTAAATATAAAGGCTCTCTATGTTGCTCAGGGTGGTCTCGAATTCCTGGACTCAAG 1995  
CAGTCTGCCCCACYTCAGACTCCCAAAGCGGTGGAATTAGARGCGTGAGCCCCCATGCTTGGCCTTACCTTTCTACYTITT 2074  
TATAATTCCTGTATGTATTTATTTATGAACATGAAGAACTTTAGTAAATGTACTTGTTTACATAGTTATGTGAATAGA 2153  
TTAGATAAACATAAAAGGAGGAGACATACAATGGGGGAAGAAGAAGTCCCTGTGAAGAAGTTNACGNTCTGGTTTC 2232  
CAGCCTTCCCTCAGATGTACTTTGGCTTCAATGATTTGGCAACTTCTACAGGGGCCAGTCTTTTGAAGTGGACAACCTTA 2311  
CAAGTATATGAGTATTTATTTATAGGTAGTTGTTTACATATGAGTGGGACCAAAGAGAACTGGATCCACGTGAAGTCTT 2390  
GTGTGTGGCTGGTCCCTACCTGGGCAGTCTCATTTTGCACCCATAGCCCCCATCTATGGACAGGCTGGGACAGAGGCAGA 2469  
TGGGTTAGATCACACATAACAATAGGGTCTATGTCTATATCCCAAGTGAACCTTGAGCCCTGTTTGGGCTCAGGAGATAGA 2548  
AGACAAAATCTGTCTCCACGTCTGCCATGGCATCAAGGGGAAGAGTAGATGGTGGCTTGAGAATGGTGTGAAATGGTT 2627  
GCCATCTCAGGAGTAGATGGCCCGGCTCACTTCTGGTTATCTGTCTACCCCTGAGCCCATGAGCTGCCTTTTAGGGTACAG 2706  
ATTCCTTACTTGAGGACCTTGGCCGCTCTGTAAAGCATCTGACTCATCTCAGAAATGTCAATTCCTTAACACTGTGGCAA 2785  
CAGGACCTAGAATGGCTGACGCATTAAAGGTTTCTCTCTGTGTCTCTGTTCTATTATTGTTTAAAGACCTCAGTAACCAT 2864  
TTTACGCTCTTTCCAGCAAACCTTCTCCATAGTATTTTCACTCATGGAAGGATCATTTATGCAGGTAGTCAATCCAGGA 2943  
GTTTTTGGTCTTTTCTGTCTCAAGGCATTGTGTGTTTTGTGTCGGGACTGGTTTTGGGTGGGACAAAGTTAGAATTGCCT 3022  
GAAGATCACACATTCAGACTGTGTGTCTGTGGAGTTTTAGGAGTGGGGGTGACCTTTCTGGTCTTTGCACTTCCATC 3101  
CTCTCCCACTTCCATCTGGCATCCACGGGTGTCTCCCTGCACTTCTGGAAGGCACAGGGTGTCTGCTGCCTCTCTGGTCT 3180  
TTGCCCTTGTCTGGGCTTCTGTGTCAGGACGCTCAGCCTCAGGGCTCAGAAGGTGCCAGTCCGGTCCAGGTCCCTTTGTC 3259

FIG. 4 (2 of 3)

CCTTCCACAGAGGCTTCCTAGAAGATGCATCTAGAGTGTGAGCCTTATCAGTGTFTAAGATTTTCTTTTATTTTAA 3338  
 TTTTTTIGAGACAGAACTCTACTCTCTCGCCCCAGGCTGGAGTGCAACGGTACGATCTTGGCTCAGTGCAACCTCCGCCT 3417  
 CCTGGGTTCAAGCGATTCCTGTCCTCAGCCTCCGAGTAGCTGGGATTGCAGGCACCCGCCACCAAGCCTGGTTAATT 3496  
 TTTGTATTTTAGTAGAGACGGGGTTTCAACCATGTTGGTCAGGCTGGTCTCGAACTCCTGAOCTCAGGTGATCCACCTT 3575  
 GGCCTCCGAAAGTGCTGGGATTACAGGGGTGAGCCACCAGCCAGGCCAAGCTATTCTTTTAAAGTAAGCTTCCTGACGA 3654  
 CATGAAATAATTGGGGTTTGTGTTTAGTTACATTAGGCTTTGCTATATCCCCAGGCCAAATAGCATGTGACACAGG 3733  
 ACAGCCATAGTATAGTGTGTCCTGTTGGTGGTGTCTTTTCATGCTTCTGCCCTGTCAAAGGTCCCTATTTGAAATGT 3812  
 GTTATAATACAAACAAGGAAGCACATTGTGTACAAAATACTTATGTATTTATGAATCCATGACCAAATTAAATATGAAA 3891  
 CCTTATATAAAGGSGGGGGCCCGC 3964





AAGATTTTCAGGGGTACCTATGAAATTGCTTTAAATGCACTGCTGGTGTAATAATTAGCAAGCAAAAGCGTTTCTGT 1643  
 GACTTCAGGTACCAGCTTAAGAGCACTAGGGATGGGGAACGAATGCCAAATCAGACTCCACCTAGAGCACCAGGAAAC 1722  
 AGCTTGTACCCCTGGTAGGGAAATGGTGTGCTGAAAGGGGAGGCTGAGCCAGTGCGAGACTGAACTTGTGCAGCCTTAG 1801  
 CCAAGACAAAGCAGTGTTTTTCAGCAGACGGCTGATGGGACAGGAATTGAAGAAGAGAATTGACTCGTATGAACAGGAC 1880  
 AGGGTGAAATGCTGGGAATTATAATGGGAAACAAACTATCTATGTTTCATATTTTGTAAATTTTCATTGTGTTAAGTTT 1959  
 ATATCTGGATATAATGTTCTTTTAAACAAGTATAATCATATCGTCGGAGGTTAAGATTATGAAATTTTAGAATCTCTA 2038  
 TTCAAGATGATGTTCACTCCAAATACACTACAGAATTTAGTCAACATTTTATATAATGTTTCAATAAATGTTTCTTTCA 2117  
 ATAAAAAAAAAAAAAAAAA 2135

M P S L P A P P A P L L L L G L L L L G 20  
ATG CCG AGC CTC CCG GCC CCG CCG GCC CCG CTG CTG CTC CTC GGG CTG CTG CTG CTC GGC 60  
S R P A R G A G P E P P V L P I R S E K 40  
TCC CGG CCG GCC CCG GGC GCC GGC CCA GAG CCC CCC GTG CTG CCC ATC CGT TCT GAG AAG 120  
E P L P V R G A A G C T F G G K V Y A L 60  
GAG CCG CTG CCC GTT CCG GGA GCG GCA GGC TGC ACC TTC GGC GGG AAG GTC TAT GCC TTG 180  
D E T W H P D L G E P F G V M R C V L C 80  
GAC GAG ACG TGG CAC CCG GAC CTA GGG GAG CCA TTC GGG GTG ATG CCG TGC GTG CTG TGC 240  
A C E A P Q W G R R T R G P G R V S C K 100  
GCC TGC GAG GCG CCT CAG TGG GGT CCG CGT ACC AGG GGC CCT GGC AGG GTC AGC TGC AAG 300  
N I K P E C P T P A C G Q P R Q L P G H 120  
AAC ATC AAA CCA GAG TGC CCA ACC CCG GCC TGT GGG CAG CCG CGC CAG CTG CCG GGA CAC 360  
C C Q T C P Q E R S S S E R Q P S G L S 140  
TGC TGC CAG ACC TGC CCC CAG GAG CCG AGC AGT TCG GAG CCG CAG CCG AGC GGC CTG TCC 420  
F E Y P R D P E H R S Y S D R G E P G A 160  
TTC GAG TAT CCG CCG GAC CCG GAG CAT CCG AGT TAT AGC GAC CCG GGG GAG CCA GGC GCT 480  
E E R A R G D G H T D F V A L L T G P R 180  
GAG GAG CCG GCC CGT GGT GAC GGC CAC ACG GAC TTC GTG GCG CTG CTG ACA GGG CCG AGG 540  
S Q A V A R A R V S L L R S S L R F S I 200  
TCG CAG GCG GTG GCA CGA GCC CGA GTC TCG CTG CTG CCG TCT AGC CTC CGC TTC TCT ATC 600  
S Y R R L D R P T R I R F S D S N G S V 220  
TCC TAC AGG CCG CTG GAC CCG CCT ACC AGG ATC CCG TTC TCA GAC TCC AAT GGC AGT GTC 660  
L F E H P A A P T Q D G L V C G V W R A 240  
CTG TTT GAG CAC CCT GCA GCC CCC ACC CAA GAT GGC CTG GTC TGT GGG GTG TGG CCG GCA 720  
V P R L S L R L L R A E Q L H V A L V T 260  
GTG CCT CCG TTG TCT CTG CCG CTC CTT AGG GCA GAA CAG CTG CAT GTG GCA CTT GTG ACA 780  
L T H P S G E V W G P L I R H R A L A A 280  
CTC ACT CAC CCT TCA GGG GAG GTC TGG GGG CCT CTC ATC CCG CAC CCG GCC CTG GCT GCA 840  
E T F S A I L T L E G P P Q Q G V G G I 300  
GAG ACC TTC AGT GCC ATC CTG ACT CTA GAA GGC CCC CCA CAG CAG GGC GTA GGG GGC ATC 900  
T L L T L S D T E D S L H F L L L F R G 320  
ACC CTG CTC ACT CTC AGT GAC ACA GAG GAC TCC TTG CAT TTT TTG CTG CTC TTC CGA GGG 960  
L L E P R S G G L T Q V P L R L Q I L H 340  
CTG CTG GAA CCC AGG AGT GGG GGA CTA ACC CAG GTT CCC TTG AGG CTC CAG ATT CTA CAC 1020  
Q G Q L L R E L Q A N V S A Q E P G F A 360  
CAG GGG CAG CTA CTG CGA GAA CTT CAG GCC AAT GTC TCA GCC CAG GAA CCA GGC TTT GCT 1080  
E V L P N L T V Q E M D W L V L G E L Q 380  
GAG GTG CTG CCC AAC CTG ACA GTC CAG GAG ATG GAC TGG CTG GTG CTG GGG GAG CTG CAG 1140

FIG. 6 (1 of 3)

M A L E W A G R P G L R I S G H I A A R 400  
ATG GCC CTG GAG TGG GCA GGC AGG CCA GGG CTG CGC ATC AGT GGA CAC ATT GCT GCC AGG 1200  
K S C D V L Q S V L C G A D A L I P V Q 420  
AAG AGC TGC GAC GTC CTG CAA AGT GTC CTT TGT GGG GCT GAT GCC CTG ATC CCA GTC CAG 1260  
T G A A G S A S L T L L G N G S L I Y Q 440  
ACG GGT GCT GCC GGC TCA GCC AGC CTC ACG CTG CTA GGA AAT GGC TCC CTG ATC TAT CAG 1320  
V Q V V G T S S E V V A M T L E T K P Q 460  
GTG CAA GTG GTA GGG ACA AGC AGT GAG GTG GTG GCC ATG ACA CTG GAG ACC AAG CCT CAG 1380  
R R D Q R T V L C H M A G L Q P G G H T 480  
CGG AGG GAT CAG CGC ACT GTC CTG TGC CAC ATG GCT GGA CTC CAG CCA GGA GGA CAC ACG 1440  
A V G I C P G L G A R G A H M L L Q N E 500  
GCC GTG GGT ATC TGC CCT GGG CTG GGT GCC CGA GGG GCT CAT ATG CTG CTG CAG AAT GAG 1500  
L F L N V G T K D F P D G E L R G H V A 520  
CTC TTC CTG AAC GTG GGC ACC AAG GAC TTC CCA GAC GGA GAG CTT CGG GGG CAC GTG GCT 1560  
A L P Y C G H S A R H D T L S V P L A G 540  
GCC CTG CCC TAC TGT GGG CAT AGC GCC CGC CAT GAC ACG CTG TCC GTG CCC CTA GCA GGA 1620  
A L V L P P V K S Q A A G H A W L S L D 560  
GCC CTG GTG CTA CCC CCT GTG AAG AGC CAA GCA GCA GGG CAC GCC TGG CTT TCC TTG GAT 1680  
T H C H L H Y E V L L A G L G G S E Q G 580  
ACC CAC TGT CAC CTG CAC TAT GAA GTG CTG CTG GCT GGG CTT GGT GGC TCA GAA CAA GGC 1740  
T V T A H L L G P P G T P G P R R L L K 600  
ACT GTC ACT GCC CAC CTC CTT GGG CCT CCT GGA ACG CCA GGG CCT CGG CGG CTG CTG AAG 1800  
G F Y G S E A Q G V V K D L E P E L L R 620  
GGA TTC TAT GGC TCA GAG GCC CAG GGT GTG GTG AAG GAC CTG GAG CCG GAA CTG CTG CGG 1860  
H L A K G M A S L M I T T K G S P R G E 640  
CAC CTG GCA AAA GGC ATG GCC TCC CTG ATG ATC ACC ACC AAG GGT AGC CCC AGA GGG GAG 1920  
L R G Q R R T V I C D P V V C P P P S C 660  
CTC CGA GGG CAG AGA CGA ACG GTG ATC TGT GAC CCG GTG GTG TGC CCA CCG CCC AGC TGC 1980  
P H P V Q A P D Q C C P V C P E K Q D V 680  
CCA CAC CCG GTG CAG GCT CCC GAC CAG TGC TGC CCT GTT TGC CCT GAG AAA CAA GAT GTC 2040  
R D L P G L P R S R D P G E G C Y F D G 700  
AGA GAC TTG CCA GGG CTG CCA AGG AGC CGG GAC CCA GGA GAG GGC TGC TAT TTT GAT GGT 2100  
D R S W R A A G T R W H P V V P P F G L 720  
GAC CGG AGC TGG CGG GCA GCG GGT ACG CGG TGG CAC CCC GTT GTG CCC CCC TTT GGC TTA 2160  
I K C A V C T C K G G T G E V H C E K V 740  
ATT AAG TGT GCT GTC TGC ACC TGC AAG GGG GGC ACT GGA GAG GTG CAC TGT GAG AAG GTG 2220  
Q C P R L A C A Q P V R V N P T D C C K 760  
CAG TGT CCC CGG CTG GCC TGT GCC CAG CCT GTG CGT GTC AAC CCC ACC GAC TGC TGC AAA 2280

FIG. 6 (2 of 3)

Q C P V G S G A H P Q L G D P M Q A D G 780  
 CAG TGT CCA GTG GGG TCG GGG GCC CAC CCC CAG CTG GGG GAC CCC ATG CAG GCT GAT GGG 2340  
  
 P R G C R F A G Q W F P E S Q S W H P S 800  
 CCC CGG GGC TGC CGT TTT GCT GGG CAG TGG TTC CCA GAG AGT CAG AGC TGG CAC CCC TCA 2400  
  
 V P P F G E M S C I T C R C G A G V P H 820  
 GTG CCC CCT TTT GGA GAG ATG AGC TGT ATC ACC TGC AGA TGT GGG GCA GGG GTG CCT CAC 2460  
  
 C E R D D C S L P L S C G S G K E S R C 840  
 TGT GAG CGG GAT GAC TGT TCA CTG CCA CTG TCC TGT GGC TCG GGG AAG GAG AGT CGA TGC 2520  
  
 C S R C T A H R R P A P E T R T D P E L 860  
 TGT TCC CGC TGC ACG GCC CAC CGG CGG CCA GCC CCA GAG ACC AGA ACT GAT CCA GAG CTG 2580  
  
 E K E A E G S \* 868  
 GAG AAA GAA GCC GAA GGC TCT TAG 2604  
  
 GGAGCAGCCAGAGGGCCAAGTGACCAAGAGGATGGGGCCTGAGCTGGGGAAGGGGTGGCATCGAGGACCTTCTTGCAATT 2683  
  
 CTCCTGTGGGAAGCCAGTGCCTTTGCTCCTCTGTCTGCTCTACTCCCACCCCCACTACCTTTGGGAACCCACAGCTC 2762  
  
 CACAAGGGGGAGAGGCAGCTGGGCCAGACCGAGGTCACAGCCACTCCAAGTCCTGCCCTGCCACCCCTCGGCCTCTGTCC 2841  
  
 TTGGAAGCCCCACCCCTTTCTCCTGTACATAATGTCACTGGCTGTGTGGGATTTTAAATTTATCTTCACTCAGCACCA 2920  
  
 AGGGCCCCCGACACTCCACTCCTGCTGCCCTGAGCTGAGCAGAGTCATTATTGGAGAGTTTTGTATTTATTAACAT 2999  
  
 TTCTTTTTCAGTCAAAAAAAAAAAAAAGGGCGGCCGC 3037

FIG. 6 (3 of 3)

APAPALLLLGLLLLGSRPARGAGPEPPVLPPIRSEKEPLPVRGAAGCTFGG 60  
 ..|: ||::|::: | :::...|||..|..| :::|||  
 QCPPIVVWTLWIM....AVDCSRPKVFLPIQPEQEPLQSKTPAGCTFGG 47  
 .  
 KVALDETWHPD LGEPFGVMRCVLCACEAPQWGRRTRGPRVSCKNIKPE 110  
 |..|:..|||...|:| | | :::| | :..|:|...|..  
 KFYSLED SWHPDLGEPFGVMHCVLCYCE.PQRSRRGKPSGKVSCKNIKHD 96  
 .  
 CPTPACGQPRQLPGHCCQTCPOERSSSERQPSGL..SFEYPRDPEHRSYS 158  
 ||..|:..| | | | | | | :.. : : ||| :... |.  
 CPSPSCANPILLPLHCCKTCPKAPPPPIKKSDVFVDFGEYFQEKDDDLN 146  
 .  
 DRGEPGAERARGDGHTDFVALLTGPR.....SQAVARARVSLLRSSLR 202  
 ||: :::: | ::::..:| | | | :|. . :||:| |..| |.  
 DRSYLSSDDVAVEESRSEYVALLTAPSHVWPPVTSGVAKARFNLQRSNLL 196  
 .  
 FSISYRRLDRPTRIRFSDSNGSVLFEHPA...APTQDGLVCGVWRAVPRL 249  
 | | | ::::| | | | | :| | | | | . :...|: :| | :| | : |  
 FSITYKWIDRLSRIRFSDLDGSVLFEHPVHRMGSPRDDTICGIWRSLNRS 246  
 .  
 SLRLLRAEQLHVALVTTLTHPSGEVWGPLIRHRALAAETFSAILTLEGPPQ 299  
 .| | | | ::: |. | | | | ..|:..|:..|:| | .|. | | :| | | :...  
 TLRLLRMGHILVSLVTTLSEPEISGKIVKHKALFSESFSALLTPEDSDE 296  
 .  
 QGVGGITLLTSLDTEDSLHFLLLFRGLLEPRSGGLTQVPLRLQILHQGQL 349  
 |. | | :::| | | | :|. | | | :|:| | | :. :. |:|: :| | | | :..  
 TGGGGLAMLTLSDVDDNLHFILMLRGLSGEEGD...QIPILVQISHQNHV 343  
 .  
 LRELQANVSAQEPGFAEVLPNLTVQEMDWLVLGELQMALEWAGRPGLRIS 399  
 :| | | | :| | | | :| | | | :|. .| | | | :|:|:..: | |.. :|  
 IRELYANISAEQDFAEVLPLDSSREMLWLAQQGLEISVQTEGRRPQSMS 393  
 .  
 GHIAARKSCDVLQSVLCGADALIPVQTGAAGSASLTLLGNGSLIYQVQVV 449  
 | |..| | | | | | | :|:| | | | | | | :| | :| | | | :|:|..  
 GIITVRKSCDTLQSVLSGGDALNPTKTGAVGSASITLHENGTTLEYQIQIA 443

GTSSEVVAMTLETKPQRDQRTVLCHMAGLQPGGHTAVGICPGLGARGAH 499  
 |||.||:|||||.||:..||:|.|. :. ||: |  
 GTMSTVTAVTLETKPRRKTKRNILHDMSKDYHDGR.VWGYWIDANARDLH 492  
 MLLQNELFLNVGTDKDFPDGELRGHVAALPYCGHSARHDTLSVPLAGALVL 549  
 |||||.|||||:|||||.||:|||||:..:| |.:|.||..|.|||||.||:|  
 MLLQSEFLNVATKDFQEGELRGQITPLLYSGLWARYEKLVPVPLAGQFVS 542  
 PPVKSQAAGHAWLSLDTHCHLHYEVLLVGLGGSEQGTVTAHLLG..... 593  
 ||:..|||:|||||.|||||:..:| |.:|.||| |  
 PPIRTGSAGHAWVSLDEHCHLHYQIVVTGLGKAEDAALNAHLHGFAELGE 592  
 PPGTPGPRRLKGFYGSEAQGVVKDLEPELLRHLAKGMASLMITTKGSP 642  
 ..:|.||:|||||:|||||: |||: |||.||:| | : :. |||. |  
 VGESSPGHKRLLKGFYGSEAQGSVKDLDLELLGHLRGTAFIQVSTKLN 642  
 RGELRG..... 648  
 ||:|  
 RGEIRGQIHIPNSCESGGVSLTPEEPEYEEYIYEEGRQRPDDLRLKDPRA 692  
 .....QRRTVICDPVVCPPPSCPHPVQA 671  
 |:|||||:|||||.||:|  
 QSFEGQLRAHGSRWAPDYDRKCSVCSCQKRTVICDPVCPPLNCSQPVHL 742  
 PDQCCPVCPEKQDVRDLPLGLPRSRDPGEGCYFDGDRSWRAAGTRWHPVVP 721  
 |||||:|.||:|:..|.|. :. ||:|||||:|||||:|.||  
 PDQCCPVCEEKKEMREVKKPERAR.TSEGCFDGDGRSWKAAGTRWHPFVP 791  
 PFGLIKCAVCTCKGGTGEVHCEKVQCPRLACAQPVVRVNPTDCCKQCPVGS 771  
 |||||:|||||:|||||: ||:|.||:|.||.|||||:..  
 PFGLIKCAICTCKGSTGEVHCEKVTCPKLSCTNPIRANPSDCKQCPVEE 841  
 GAHPQLGDPMQADGPRGCRFAGQWFPESQSWHPSVPPFGEMSCITCRGA 821  
 .. :|:|.||:|: ||:|:|:|.||.|||||:|:| |:.  
 RSPMELADSMQSDGAGSCRFRHWYPNHERWHPTVPPFGEMKCVTCTCAE 891

GVPHCERDDCSLPLSCGSGKESRCCSRC.....TAHRRPAPETRTRTDPEL 865  
|::| |::|. . :...:| .|||.:.| ...: ...|||. . :  
GITQCRRQECTGTTCGTGSKRDRCCCTKCKDANQDEDEKVKSDETRTPWSF 941